

ALTERNATIVES, INCLUDING THE PROPOSED ACTION



OVERVIEW OF ALTERNATIVES

This section discusses the way the National Park Service manages each resource or issue, and delineates a range of reasonable and feasible actions that could be taken. The no-action alternative is commonly referred to as the status quo alternative, since this is what would occur if no further agency action was taken. The range of alternatives identified includes actions that could reasonably be implemented given the legislative and legal constraints under which the National Park Service operates. It includes management proposals that are part of existing plans but may not have been implemented yet. The alternatives are structured such that alternative 1 provides a full description of all actions, while the others refer to alternative 1 or the no-action alternative, presenting only the actions that are different. Issues are presented on the subjects of natural resources, cultural resources, Native American interests, visitor use, services and facilities, roads and circulation, administrative operations and facilities, education and research centers, land ownership and use, and plan implementation.

FIGURE 1. PRESERVE BOUNDARY AND PRELIMINARY WILDERNESS

ALTERNATIVE 1: PROPOSED ACTION

GENERAL DESCRIPTION

The vision for the preserve is the protection and perpetuation of native species in a self-sustaining environment. Mojave is a natural environment and a cultural landscape where protection of native desert ecosystems and processes is ensured for future generations. It is a place where historical use of the land is apparent, and preservation and interpretation of some of those key historic and archeological resources are important for public education and enjoyment. Education and research activities on the natural and cultural environment are encouraged, and access by all people, regardless of capability, is ensured.

Alternative 1 seeks to manage the preserve to perpetuate the sense of discovery and adventure that now exists. Responses to public meetings and letters have indicated that members of the public want to minimize the development of typical NPS facilities that would detract from the setting and sense of discovery that currently exists. This means minimizing development, including the proliferation of signs, new campgrounds and outdoor interpretive exhibits. This alternative looks to adjacent communities to provide most visitor support services such as food, gas, and lodging.

This alternative also seeks to offer maximum opportunities for roadside camping, backcountry camping, and access to the preserve by existing roads consistent with the NPS mission.

This alternative provides for a museum and interpretive facility in the middle of the preserve at the Kelso Depot. The National Park Service proposes to seek funding for the complete historic restoration of the depot and its use for visitor services, including interpretive displays. Operation of a small food service concession in the old Beanery cafe in Kelso Depot is also proposed.

This alternative also brings the NPS mission to the management of the resources within the 1.6 million-acre preserve, in accordance with the 1994 Congressional designation of the area as a unit of the national park system. Stated simply, this means the primary goal is to protect the resources while providing for visitor enjoyment. However, at Mojave National Preserve, this mission must be balanced with the existence of major utility corridors and with other mandates from Congress, such as grazing, hunting, and mining under NPS regulations. Some changes are proposed for these activities, with the goal of providing for resource preservation and visitor enjoyment.

This alternative envisions existing landowners maintaining their current way of life, while providing funding for the purchase of property from willing sellers where proposed uses conflict with the primary mission of preserving resources.

NATURAL RESOURCES

AIR QUALITY/VISIBILITY

The National Park Service is responsible for protecting air quality under both the 1916 Organic Act and the Clean Air Act (42 USC 7401 et seq.). Although the Clean Air Act gives the highest level of air quality protection to class I areas, it also provides many opportunities for the National Park Service to participate in the development of pollution control programs to preserve, protect, and enhance the air quality of all units of the national park system, including class II areas. The National Park Service would seek class I designation for the preserve and would seek to perpetuate the best possible air quality in parks because of its critical importance to visitor enjoyment, human health, scenic vistas, and the preservation of natural systems and cultural resources. The National Park Service would work toward promoting and pursuing measures to safeguard these values from air pollution's adverse effects and would strive to set the best example for others to follow in all the agency's development and management activities. In cases of doubt as to the effects of existing or potential air pollution on park resources, the National Park Service would err on the side of protecting air quality and related values for future generations.

Sections 118 and 176 of the Clean Air Act require federal agencies and facilities to meet all federal, state, and local air pollution control laws and regulations. If units or facilities are located in areas that do not meet federal or state air pollution control standards (nonattainment areas), those units or facilities must conform to requirements established to attain and maintain those standards. The requirements may include provisions to reduce emissions from existing facilities and limit emissions from proposed facilities on a greater than 1:1 basis.

Since Mojave is located in a non-attainment area for one or more air pollutant, no action proposed in any alternative in this plan will lead to violations of federal or state air pollution control laws or regulations, and no-action would increase emissions or violate the state conformity requirements. The preserve's staff would work with appropriate air pollution control officials to ensure compliance with all requirements.

VIEWSHEDS/VISUAL QUALITY

Mojave National Preserve would prepare guidelines for the built environment to establish visual consistency and themes in facility development. Guidelines would also be created for reaching visual compatibility with surrounding landscapes, significant architectural features, and site details. The primary objective of these guidelines would be to create harmony between the built environment and the natural environment.

With the increasing use of cellular communication equipment, more antennas and relay equipment are being installed throughout the country. The overall management goal of each NPS unit is to protect and maintain the visual quality of the landscape and the built

environment. To help achieve this goal, a communication management plan would be prepared that would address the NPS goals and the need to establish sites for communication equipment. No new permits would be issued until the completion of such a plan. The plan would include the following requirements:

- All above-ground communication equipment must not distract from the visual quality of the scenery.
- Each new proposal for radio or cellular antennas or towers must demonstrate that the equipment would provide a critical service for visitors and NPS staff and is not duplicative.
- The installation of new equipment outside the preserve or on existing communication towers or at defined sites must be considered before the construction of new sites is considered.
- New locations would be reviewed through the environmental assessment process which must consider impacts on the visual quality of the scenery.

The National Park Service would work with neighboring landowners on topics of mutual interest being sensitive to the influences and effects that park management might have on adjacent landowners. The National Park Service would seek to enhance beneficial effects and to mitigate adverse effects in ways consistent with its policies and management objectives. The agency would encourage compatible adjacent land uses and seek to mitigate potential adverse effects on park values by actively participating in planning and regulatory processes of neighboring jurisdictions, other federal, state, and local agencies, and Native Americans.

NIGHT SKY

The National Park Service would cooperate with neighbors and local government agencies to seek to minimize artificial light intrusion, recognizing the part that darkness and the night sky play in the overall visitor experience. The National Park Service would strive to set the best example in all developments that involve the use of artificial outdoor lighting, ensuring that such lighting is limited to basic safety requirements and shielded to the maximum extent possible, to keep light on the intended subject and out of the night sky. Baseline light measurements would be established to monitor changes over time.

NOISE AND OVERFLIGHTS

The National Park Service would strive to preserve the natural quiet and sounds associated with the physical and biological resources of Mojave. Activities causing excessive or unnecessary sounds in or adjacent to parks, including low-level aircraft overflights, would be monitored, and action would be taken to prevent or minimize unnatural sounds adversely affecting park resources and values or visitor enjoyment. The National Park Service would collaborate with the Department of Defense (DOD) to minimize impacts on visitors and resources from military overflights, as authorized by sec. 802 of the California Desert Protection Act.

WATER RESOURCES

Water for the preservation, management, development, and use of the preserve's water system would be obtained and used in accordance with legal authority and with due consideration for the needs of other water users. Should the National Park Service seek to acquire private land within its boundaries, the essential water rights attached to those lands would also be sought for acquisition. Water would be used efficiently and frugally. The National Park Service would seek to protect, perpetuate, and possibly restore surface water and groundwater as integral components of park aquatic and terrestrial ecosystems. Surface water and groundwater withdrawn for the public use would be the minimum amount necessary to achieve preserve purposes. All water withdrawn for domestic use would be returned watershed system once it has been treated to ensure that there would be no impairment of preserve resources. Interbasin transfers would be avoided. The effects to the preserve's resources from water withdrawn from sources outside of the preserve (for example, developments at Primm and mining activities at the Molycorp mine at Mountain Pass) would be monitored. If adverse effects were found, the National Park Service would take all legal and appropriate steps necessary to protect natural resources from the effects attributed to such activities.

Pursuant to Congressional direction in the California Desert Protection Act, Mojave National Preserve would seek to restore, maintain, or enhance the quality of all surface and ground waters within the preserve consistent with the Clean Water Act (33 USC et seq.) and other applicable federal, state, and local laws and regulations.

Floodplain and Wetland Areas

The occupancy and modification of floodplain and wetland areas would be avoided wherever possible. Where no practicable alternatives exist, mitigating measures would be implemented to minimize potential harm to life, property, and the natural floodplain and wetland values. Management of floodplain and wetland areas is subject to the provisions of Executive Order 11988, "Floodplain Management" (42 USC 4321), Executive Order 11990, "Protection of Wetlands" (42 USC 4321), and the Rivers and Harbors Act (33 USC 401 et. seq.), and section 404 of the Clean Water Act (33 USC 1344).

Water Developments

The National Park Service would examine the use of and need for all guzzlers, livestock tanks, and troughs (hereafter referred to as developed water sites). Water at developed water sites would be retained for native plants and wildlife if it was found to be needed to replace water lost due to actions taken by previous human activities. These developed water sites would be retained to allow native populations of plants and animals to return to or remain at a previously disturbed population level. Simultaneously, with the retention of these developed water sites, the National Park Service would actively begin to restore natural water sources to be self-sustaining. When a water source became self-sustaining, the artificial facility would be removed. Motorized access to guzzlers in wilderness areas (to maintain guzzlers or replenish water) would be reviewed individually.

Water is necessary for livestock grazing on NPS lands. The amount of water that would be diverted or used for livestock would be maintained for the animals' health. If and when animal unit months (AUMs) were reduced (no increase in AUMs would be allowed under the CDPA) a concurrent reduction in water used for livestock purposes would be expected. The National Park Service would examine these developed water facilities and take action to restore natural waters. If the water rights are not owned by the National Park Service, the agency would work with the owners to encourage them to consider the benefits of natural water restoration.

Water Rights

The California Desert Protection Act of 1994 (CDPA) in section 706(a), with respect to each wilderness area, reserves a quantity of water sufficient to fulfill the purposes of the act. Section 706(b) mandates that the secretary of the interior and all other officers of the United States take "all steps necessary to protect the rights reserved by this section." Federal reserved rights generally arise from the purposes for the reservation of land by the federal government. When the government reserves land for a particular purpose, it also reserves, explicitly or by implication, enough unappropriated water at the time of the reservation as is necessary to accomplish the purposes for which Congress or the president authorized the land to be reserved, without regard to the limitations of state law. The rights vest as of the date of the reservation, whether or not the water is actually put to use, and are superior to the rights of those who commence the use of water after the reservation date. General adjudications are the means by which the federal government claims its reserved water rights. The McCarran Amendment (66 Stat. 560, 43 U.S.C. 666, June 10, 1952) provides the mechanism by which the United States, when properly joined, consents to be a defendant in a suit to adjudicate water rights. The precise nature and extent of the National Park Service's water rights probably will remain uncertain until the United States is joined in an adjudication, the Department of Justice files claims to water rights on behalf of the National Park Service, and the court decrees the United States. Hence, it is the responsibility of both the National Park Service and the Bureau of Land Management to protect the reserved water rights established under the CDPA and other applicable federal authorities.

The National Park Service in its general planning process for each unit of the national park system and the Bureau of Land Management in its planning process for each wilderness area have jointly agreed to incorporate their respective policies, guidelines, and administrative procedures and apply the following principles to discharge their responsibilities under section 706 of the CDPA to manage and protect federal reserved water rights (Desert Managers Group 1995):

- inventory all water sources within the boundaries of the wilderness area/park unit
- identify as a federally reserved water right all unappropriated water from any water source identified on federal lands within the boundaries of designated wilderness and/or park areas in the California Desert
- share water source inventory data

- jointly request from the California Division of Water Rights notification of any filing for appropriated water rights within or adjacent to the boundaries of BLM wilderness or units of the national park system
- vigorously defend federally reserved water rights through the state of California administrative process and, if necessary, seek judicial remedy in the appropriate courts
- quantify the amount of water reserved to fulfill the purpose of the reservation as part of any adjudication in California in which the United States may be joined under the McCarran Amendment
- where necessary, pursue acquisition of any existing nonfederal appropriated water right within their respective jurisdictions
- because use of percolating groundwater does not require a permit from the state of California, participate in local government proceedings that authorize nonfederal parties to withdraw percolating groundwater where such withdrawals may impact water sources within their respective jurisdictions to which federally reserved water rights are attached
- participate in any proceedings pursuant to Nevada state water law that may authorize withdrawal of groundwater where such withdrawal may impact water sources within their jurisdictions to which federally reserved or appropriated water rights are attached

SENSITIVE SPECIES

The National Park Service would identify and promote the conservation of all federally listed or proposed threatened or endangered species and their critical habitats in ways that were consistent with the purposes of the Endangered Species Act (16USC 1531 et seq.). (See appendix D). As necessary, the National Park Service would control visitor access to and use of critical habitats and might limit access to especially sensitive areas. Active management programs would be conducted as necessary to perpetuate the natural distribution and abundance of threatened or endangered species and the ecosystems on which they depend.

The National Park Service would also identify all state and locally listed threatened, endangered, rare, declining, sensitive, or candidate species that are native to and present in the preserve, as well as their critical habitats. Controlling access to critical habitats or conducting active management programs might be considered that would be similar to activities conducted to perpetuate the natural distribution and abundance of federally listed species. Plant and animal species considered rare or unique to the preserve would be identified and their distribution mapped. All management actions for protection and perpetuation of special status species would be determined through the preserve's resource management plan.

The National Park Service would develop collaborative partnerships with federal, state, and local agencies that manage lands adjacent to Mojave National Preserve and with academic institutions with research capabilities in desert ecology or ecosystem management.

A cooperative agreement between the National Park Service and California State University (CSU) would identify management objectives and strategies for maintaining the Mohave tui chub

population (such as cattail and other aquatic plant removal and dredging of the pond). The University maintains a population of the Mohave tui chub in small artificial ponds at the Soda Springs Desert Studies Center.

Desert Tortoise

The objective of this alternative is the delisting of the desert tortoise following recovery of the Mojave population. NPS management direction is for multiple species and protection of habitats for all native species. This alternative is directly linked with the grazing, burro management, hunting, and camping alternatives presented elsewhere in the alternatives section (see those discussions for details). The National Park Service would not propose that any particular area of the preserve be set aside under any special category for the desert tortoise. Instead it would implement the following measures throughout the preserve:

- vehicles use only on existing roads
- no competitive events that would adversely affect the desert tortoise; organized events might be acceptable on existing roads with appropriate restrictions
- no new landfills; close and reclaim existing ones
- no dumping or littering; manage trash to eliminate raven access and perches
- no agricultural clearing or commercial vegetation harvest on public lands
- no surface disturbance on public lands unless balanced with appropriate replacement lands for mitigation
- place strict limits on research in critical habitat that might adversely affect the desert tortoise
- remove all feral burros
- no plinking (random target shooting)
- big game and upland game bird hunting only during designated State seasons
- dogs must be on a leash (or under physical or voice control of owner if used for hunting)
- analyze use of seasonal speed limits on certain routes
- build no new roads
- develop partnership with California Department of Transportation and San Bernardino County to evaluate tortoise population movements and tortoise mortality over Interstate Highways 15 and 40 and on paved roads in the preserve and to develop necessary mitigating measures
- implement temporary closure of certain dirt roads and routes as needed to reduce access where human-caused tortoise mortality is identified
- eliminate unnecessary rights-of-way and easements – minimum maintenance; fence and/or install culverts along roads with heavy mortality or frequent sightings of live animals, if research proves fences to be effective to the desert tortoise population's health
- no collecting of wild or release of captive desert tortoises
- establish active restoration program for disturbed areas with appropriate compliance
- make acquisition of areas of prime desert tortoise habitat a high priority
- implement extensive interpretation, site bulletins, displays in the information and visitor centers and education in local schools relative to desert tortoise

- use minimum-impact fire suppression techniques in critical habitat, followed immediately by restoration of disturbed areas
- conduct research on impact of fire on the desert tortoise
- monitor and evaluate effects of limiting parking and camping to designated sites only

FIGURE 2. DESERT TORTOISE CRITICAL HABITAT

- inventory and eliminate hazards to the desert tortoise from abandoned mining activities or facilities (e.g., install devices to exclude the tortoise from mine shafts)

If a development project proposed on federal land would adversely affect the desert tortoise, the developer would be required to purchase equivalent habitat for the desert tortoise's preservation in accordance with the compensation formula established by the Desert Tortoise Management Oversight Group. Some activities might be required to provide for tortoise monitoring during the project. The National Park Service would apply stipulations identified in appendix E, as appropriate, for all activities permitted in areas where potential encounters with desert tortoise may occur. Mojave would continually evaluate ongoing research and consult with U.S. Fish and Wildlife Service to modify these stipulations to reflect current research recommendations.

INTRODUCED SPECIES

Nonnative plants and animals would not be introduced except under the most unusual circumstances (i.e. historic landscape restoration at Kelso Depot). The management of populations of exotic plant and animal species, up to and including eradication, would be undertaken wherever such species threaten park resources or public health and when control was prudent and feasible.

Burros

A "no burro" policy would be established at Mojave National Preserve. Before initiating this proposed burro removal program, the Mojave National Preserve will continue to manage the burro population as described in Alternative two, existing management. 130 animals is the Bureau of Land Management's former prescribed herd management level. Existing preserve management calls for burros to be managed at that level until adoption of this proposed action.

Presently, the Mojave National Preserve is in the process of reducing (through live-capture and adoption) the existing burro population down to a population of about 130 animals. (Estimating when there will be 130 burros will be determined by subtracting the number of captured animals from 1400, the 1995 population survey result, times an estimated annual population growth rate of 15%. It is estimated that the preserve will reach a population of about 130 burros by the end of the year 2000). Animals are being captured and transported to either BLM or private facilities for adoption. A memorandum of agreement between the NPS and an Animal Protection Group is in the process of being finalized. This memorandum would provide for the Animal Protection Group to accept some of the captured animals for their care and possible future adoption to private parties.

Upon reaching the estimated burro population of about 130 burros the Mojave National Preserve would begin this proposed burro removal program. Burros would be removed via a multi-phased approach in a manner similar to what worked successfully in Death Valley National Monument (NPS, 1982) as described below.

Thirty days after the signing of this document's Record of Decision for Mojave National Preserve and when the burro population is at about 130 animals, phase one of the burro removal program would begin. Up to three years would be allowed for the live capture and removal of as many of the preserve's burros possible. Capture techniques would include two primary methods, enticing burros into corrals and herding using wranglers and possibly helicopters. The captured burros would be adopted through existing BLM facilities or through direct or indirect adoption programs of the National Park Service, or adoption by the efforts of a third party. Other than the Clark Mountain portion of the Mojave Preserve, no BLM Herd Management Areas exist adjacent to the Preserve. NPS would work with BLM to maintain this buffer area of no burros. Fencing the natural springs or the preserve boundary located on Clark Mountain would be evaluated to control burro access to this portion of the preserve.

In phase two the National Park Service would actively solicit animal protection groups to begin removing the remaining few animals. An agreement would be signed between the National Park Service and the group and it would provide up to 2 years for the interested Animal Protection Group to remove the remaining burros from the preserve at their expense. The National Park Service would provide oversight, possibly some logistics support and the use of some equipment and corrals. It is anticipated that most of the estimated 130 burros would likely be captured and removed through phases one and two. If no animal protection group is found, the National Park Service would begin phase three.

In phase three NPS staff would be permitted to eliminate the remaining few animals in a humane manner to achieve a zero population. This action would occur only when desert tortoises are not active above ground. By timing operations in this manner, juvenile tortoises would not be subject to predation by ravens, which are likely to congregate near burro carcasses. Phase Three would continue for an indefinite time.

Tamarisk

Mojave would continue to identify and remove non-native tamarisk (*T. ramossisima*). Planted tamarisk along the Union Pacific railroad corridor are not considered a threat and would not be removed.

DISTURBED LAND RESTORATION

The National Park Service would seek to perpetuate native plant life as part of natural ecosystems. Natural landscapes and plants would be manipulated only when necessary to achieve approved management objectives. To the maximum extent possible, plantings in all areas would consist of species native to the park or historically appropriate for the period or event commemorated. Native species would be emphasized. The use of exotic species would conform to the NPS exotic species policy (NPS 1988). Landscapes and plants might be manipulated to maintain habitat for threatened or endangered species, but in natural areas, only native plants could be used if additional plantings were done. Existing plants would be manipulated in a

manner designed to restore or enhance the functioning of the plant and animal community of which the endangered species is a natural part.

In natural areas landscape conditions caused by natural phenomena such as landslides, earthquakes, floods, and natural fires would not be modified unless required for public safety, protection of NPS facilities, or necessary reconstruction of dispersed-use facilities, such as trails. Terrain and plants could be manipulated where necessary to restore natural conditions on lands altered by human activity.

In cultural areas such as at Kelso Depot, trees, other plants, and landscape features would be managed to reflect the historical designed landscape or the historical scene associated with a significant historical theme or activity.

NATIVE SPECIES RESTORATION

The National Park Service would strive to restore native species wherever all of the following criteria could be met:

- Adequate habitat to support the species either exists or can reasonably be restored in the park and if necessary on adjacent lands and waters, and once a natural population level is achieved, it can be self-perpetuating.
- Based on an effective management plan, the species does not pose a threat to the safety of visitors, park resources, or persons or property outside park boundaries.
- The subspecies used in restoration most nearly approximates the extirpated subspecies or race.
- The species disappeared, or was substantially diminished, as a direct or indirect result of human-induced change to the species population or to the ecosystem (NPS 1988).

FIRE MANAGEMENT

Although the National Park Service recognizes the natural role of fire in ecosystems processes, the effects of fire on components of desert ecosystems are not well understood. The National Park Service is assessing and documenting the state of existing fire effects research in desert ecosystems and formulating a desert fire management strategy. Unit-specific fire management plans would be developed consistent with this policy. Over the short term (1–10 years) the fire management policy would be guided by the best available scientific knowledge of fire effects and by current NPS policy direction. A number of changes would be implemented with regard to agency-wide fire management policy. Managerial decisions regarding suppression versus monitored free-burning wildfire would be made based on criteria such as fire location, available suppression resources, vegetation and wildlife concerns, management objectives, archeological and cultural considerations, and a number of other variables. Research burns might be initiated within specific prescriptions, and burn sites would be monitored to assess changes over time.

In cooperation with other desert parks, other federal and state land managers, and the research staff in the agency or at universities, fire-related research needs would be identified and long-term studies initiated. Specific research topics might include effects on desert tortoise, postfire successional trends, or effective postfire disturbance rehabilitation strategies.

PALEONTOLOGICAL RESOURCES

Little paleontological research has been initiated or funded by the National Park Service. Most is accomplished by outside institutions that request and receive NPS research permits. The institutions, in exchange for the opportunity to excavate and study NPS resources, agree to provide information that the National Park Service can use to develop strategies for resource protection, management, and interpretation.

Paleontological resources, including both organic and mineralized remains in body or trace form, would be protected, preserved, and developed for public enjoyment, interpretation, and scientific research in accordance with park management objectives and approved resource management plans. Although paleontological research by the academic community would be encouraged and facilitated under research permits subject to NPS management criteria, the National Park Service would enhance its own knowledge of paleontological resources through comprehensive inventory and monitoring programs. To enhance the conservation and management of paleontological resources, the National Park Service would seek to develop collaborative partnerships with government agencies, academic institutions, and public and private organizations with paleontological resource management or research capabilities/ expertise. Management actions would be taken to prevent illegal collecting. Actions also might be taken to prevent damage from natural processes such as erosion. Protection could include construction of shelters over specimens for interpretation in situ, stabilization in the field, or collecting, preparing, and placing of specimens in museum collections. The localities and geologic settings of specimens would be adequately documented when specimens were collected.

CAVE RESOURCES

NPS *Management Policies* (1988) provide that caves be managed to perpetuate their atmospheric, geologic, biological, ecological, and cultural resources in accordance with approved cave management plans. Natural drainage patterns, air flows, and plant and animal communities are to be protected. In general, the NPS management direction is to avoid development of caves and to perpetuate natural conditions, while seeking to protect the resource. Where significant cave resources exist, a cave management program should be developed which would include:

- Interpretive Program
- Visitor Safety
- Cave Protection Guidelines
- Cave Restoration Program

Trail and lighting System Maintenance
Cave Zoning Classification System
Safety and Health Guidelines
Cave Geographic Information System
Inventory System and Guidelines

The National Park Service would continue to work cooperatively with the California Department of Parks and Recreation to inventory, study and protect the significant cave resources that are found at Providence Mountains State Recreation Area.

INVENTORY AND MONITORING

Inventorying and monitoring the preserve's natural resources are necessary to gain a more complete understanding of their value and condition. Mojave National Preserve would consult with people with expertise in the resource or in developing and implementing an inventorying and monitoring program. A comprehensive strategy would be developed and implemented to ensure that regional, local or national trends are documented and appropriate actions undertaken.

CULTURAL RESOURCES

The National Park Service would develop and implement a systematic, integrated program to identify, inventory, monitor, evaluate, and nominate archeological sites, historic properties, cultural landscapes, and ethnographic resources to the National Register and would manage, protect, and preserve such listed properties in a way that would preserve their documented archeological, architectural, ethnographic, historic, or research values. The program, which would protect the documented values of the properties, would be developed through collaborative partnerships with government agencies and public and private organizations with cultural resource management or research capabilities/expertise.

Mojave would prepare a scope of collections statement (SOCS) and a collection management plan (CMP) to address and document the management, protection, preservation and use of natural and cultural specimens, objects, documents, photographs or electronic media in accordance with the provisions of Chapter 9 of *NPS-28: Cultural Resource Management Guideline*. The scope of collections statement would address the significance of the collections and set limits on collections consistent with the mission statement, purpose and significance statement, and interpretive prospectus. It would also address collections generated by research, resource management, and compliance activities. The collection management plan would document and evaluate alternative approaches to management, preservation, and protection of collections identified in the scope of collections statement. Alternatives would include developing in-house collection management capability, including museum storage and preservation facilities, or using cooperative agreements with other park units, other federal agencies, or universities and museums.

The National Park Service would develop and implement a systematic applied cultural resource research program to ensure that (1) there would be adequate baseline information on location, condition, threats, and significance/integrity of resources; (2) interpretation and preservation treatment of resources would be accurate; and (3) appropriate means would be used to manage, protect, preserve, and interpret Native American heritage or other ethnographic resources. The research program would include the following studies:

- archeological studies, including a regionally based archeological research plan, an archeological overview and assessment, and archeological identification and evaluation studies
- ethnographic studies, including an ethnographic overview and assessment, a cultural sites inventory, and cultural affiliation studies
- historical studies, including a historic resource study, a cultural landscape inventory and cultural landscape report, a list of classified structures, historic structure reports, historic furnishings plans, an administrative history, and special history studies
- a scope of collections statement and a collection management plan as described above
- cultural landscape inventories, evaluations, and assessments with emphasis on themes of the history of western exploration and settlement, mining, ranching, and railroading

The preserve's resource management plan would address the requirements, projects, and funding to implement the cultural resource program. To support this program, the National Park Service would develop collaborative partnerships with government agencies and public and private organizations with expertise in cultural resource management or research capabilities. These entities could include federal, state, and county agencies, academic institutions, local and regional cultural and historical associations, and Native American tribes affiliated with lands in the national preserve. As requested, the National Park Service would cooperate with owners of historic properties within the national preserve boundaries to ensure the properties' preservation. To achieve cultural resource program objectives, under the authority of 36 CFR 1.5, the National Park Service might control or limit human activities in areas designated as culturally sensitive or threatened.

Nomination forms are being prepared for the Soda Springs Historical District that would evaluate eligibility of placing the properties on the National Register of Historic Places. If the facility was accepted for the register, its management could be affected. The National Park Service would produce a historic resource study/historic structures report that would specify the historic preservation treatments for the various Zzyzx historic structures associated with Doc Springer, including the pool house and the Sunset building (see affected environment for a complete description). The report may recommend the preparation of development concept plans for the coordination of new and existing facilities to better support current and proposed operations.

NATIVE AMERICAN INTERESTS

Consultation and coordination with historically associated tribes would be conducted on a regular basis to ensure effective exchange of viewpoints. A protocol for this relationship would use a framework citing existing legislative, executive, and policy directives as guidance to meet tribal community desires and interests.

The NPS liaison with the tribes would meet regularly with the tribes' representatives and discuss local issues. The liaison would also maintain records of communications, events, and issues; would inform the superintendent of concerns; and would develop cooperative, mutually beneficial undertakings with the tribes.

A review board would be formed to consider tribal resource management plans, to agree on cooperative monitoring of resource use, and to resolve local differences concerning resource use. At a minimum, the board would be composed of the preserve superintendent and the liaison, plus the chairpersons of the tribal councils and another representative.

The National Park Service would work with the Bureau of Indian Affairs to seek to provide for training internships for tribal members.

VISITOR USE, SERVICES, AND FACILITIES

INTERPRETIVE AND ORIENTATION PROGRAM

NPS staff would develop an interpretive plan that would guide the overall direction and emphasis of the interpretive and educational programs. The overall objective would be to support the vision of visitors being able to experience a land relatively free of development and improvements, with opportunities to feel a sense of exploration and discovery. The staff would constantly seek to understand and respond to visitor needs while striving to improve interpretive programs and facilities. To help accomplish this goal, visitor studies would be conducted every 5 – 10 years or as needed to gain the appropriate information (as funds are available). The National Park Service would work with California State Parks to develop a coordinated interpretive program that would offer information on Providence Mountains State Recreation Area and the Mojave National Preserve.

Existing interpretive media would be analyzed for accuracy, effectiveness, and appropriateness; some might be removed or replaced. Interpretive services would be supported by nonpersonal media such as wayside exhibits, brochures, and publications. Personal services such as ranger-led tours and nature walks would also be available.

INTERPRETATION AND ORIENTATION FACILITIES

A small information and visitor contact center would be placed at the headquarters building in Barstow to serve the public and specifically to fill the needs of local communities. Staffed information centers at Baker and Needles would continue to operate with the same focus as at present. The Hole-in-the-Wall visitor contact station would continue to provide information and serve as a base for interpretive programs such as ranger-led walks and talks (see “Administrative Operations and Facilities” for more information on Hole-in-the-Wall). Because the preserve has many highway entrances and only two staffed information centers outside its boundary, many visitors might arrive without much opportunity to receive advanced information. To remedy this problem, the staff would develop effective means of providing advanced information on the preserve and the Mojave Desert. The overall objective of this proposal would be to try to provide advance information that would improve the quality of people’s visit to the preserve.

Technological media such as compact disks and audiotapes would be provided to give visitors portable information. Brochures and other printed material would support a self-guiding interpretive program. Information would be provided in several languages and for various learning styles. These items might be part of an advance information program. NPS employees also would emphasize visitor safety and resource protection.

Kelso Depot

Kelso Depot would be restored to its period of historical significance for use as a museum and interpretive facility. The restored depot would include a lobby, information space, a museum, audiovisual exhibits, presentation space, public restrooms, publication sales, and storage space. The building would also be modified to provide the following functions: (1) The Beanery Café would be restored to an operating restaurant to provide a limited amount of food service; (2) NPS administrative offices would be established in the depot; (3) Short-term lodging for employees or others may be established. (The latter would be done only if mitigation measures from the current flood study are implemented). Besides the depot restoration, the following are other key elements of the Kelso Depot restoration and interpretation strategy. Refer to appendix B for a more complete description:

- acquire the Kelso schoolhouse and general store for possible preservation and interpretation
- acquire adjacent private lands to provide adequate space for parking and exhibits and to allow the protection of the cultural landscape of the Kelso area
- take necessary steps to secure flood dike to ensure protection of the depot during flood events
- restore historic landscaping
- install water well and waste water treatment system
- evaluate possible elevated viewing platform
- evaluate possible interpretation of historic iron ore loading bin and Vulcan Mine
- evaluate possible interpretation and identify appropriate locations for the display of a caboose and develop agreement for its restoration

ROAD OR TRAILSIDE DISPLAYS

A minimal number of road or trailside interpretive wayside panels would be installed. Signs would be posted asking visitors to check for tortoises under their vehicles before leaving parking areas. Displays typically would be placed along paved or other heavily traveled roads to interpret significant and interesting resources visible from each area. Safety and orientation panels would be installed at key trailheads. A wayside exhibit plan would be prepared. Care would be taken to make and keep these displays as unobtrusive as possible and secondary to the landscape they were interpreting. The objective behind this proposal is to provide a landscape relatively free of exhibits or signs so that visitors could experience a sense of exploration and discovery.

EDUCATION AND OUTREACH

The preserve staff would continue to pursue partnerships with school teachers and university field offices at the Desert Studies Center at Soda Springs, the Granite Mountains Natural Reserve, and others to provide students and the public with current information on the cultural and natural elements of the preserve. Space inside the Kelso Depot and at Soda Springs might be considered for use by field classes. Where possible, field classes and seminars would be offered with assistance from CSU and UC systems and other education providers. Educational programs would be expanded as staffing permits. Programs and information would be developed for visitors with little previous exposure to desert areas. Programs would seek to make resources and experiences more accessible to diverse audiences while retaining primitive conditions and protecting resources. A special educational outreach effort would be made to reach students that might otherwise not have an opportunity to visit national parks.

Soda Springs

The existing self-guided interpretive program would be revamped, following the recommendations of a long-range interpretive plan and site specific studies. Ranger-led programs would be available where topics matched primary interpretive themes and visitor experience goals. Visitor use and interpretive programs in this area would be coordinated with California State University. Where possible, the procedures and results of ongoing desert research would be interpreted to the public.

DAY USE AREAS

The following areas would be designated for day use to avoid the potential conflict between recreational day visitors and overnight campers.

- All paved roads and all side roads within 0.5 mile of the pavement, unless designated as an informal camping area.
- The access road to the Kelso Dunes parking lots and the area north of the road to the crest of the dunes, or a distance of 1 mile.

- Fort Piute, including an area within 0.5 mile of the fort ruins.
- The area within 0.5 mile of the Kelso Depot.

Other areas might be designated as needed to protect the preserve's natural and cultural resources and reduce conflicts in visitor activities or other management objectives.

RECREATIONAL DAY USE ACTIVITIES

It is recognized that recreational trends continue to change and that specific, detailed directions on certain activities need to be placed under a guiding statement providing overall direction. *NPS Management Policy on Recreational Activities* (section 8), provides guidance for determining the appropriateness of recreational activities in units of the national park system.

Unless the activity is mandated by statute, the National Park Service would not allow a recreational activity within a park if it would involve any of the following results:

- inconsistency with the park's enabling legislation or proclamation or derogation of the values or purposes for which the park was established
- unacceptable impacts on visitor enjoyment due to interference or conflict with other visitor use activities
- consumptive use of park resources (does not apply to certain traditional activities specifically authorized by NPS general regulations)
- unacceptable impacts on park resources or natural processes
- unacceptable levels of danger to the welfare or safety of the public, including participants

NPS Management Policy also states that each unit of the national park system is responsible for determining which recreational activities are appropriate or inappropriate, based upon the unit's purposes and values (see the purpose and significance statements for Mojave National Preserve).

Rock-Climbing

One activity that may increase in the future is rock-climbing. To promote responsible public actions that would minimize impacts on natural and cultural resources or on other visitors, the National Park Service would adopt the following guidelines. The management goal would be to allow climbers to enjoy their experience with a sense of challenge in a manner that would leave the environment relatively unchanged or impacted, allowing future climbers an opportunity for a similar experience. Rock-climbing would also be managed with the following objectives through the management tools such as of inventory, mitigation, education, and, if necessary, closures.

- protecting cultural resources such as rock art and historic or prehistoric sites
- protecting natural resources, including threatened and endangered plants and animals
- protecting wilderness resources and values from visual and physical impacts

- protecting the outdoor recreational experiences of visitors not participating in rock-climbing
- protecting geological resources by promoting low-impact climbing methods and prohibiting drilling or other actions that would leave permanent anchors/bolts in or on rock faces
- developing an open communication line with the climbing community to promote a spirit of cooperation in achieving objectives and resolving problems
- clean climbing methods would be promoted

The National Park Service would seek ways to educate the public on proper climbing ethics and outdoor skills such as those promoted by the National Outdoor Leadership School's "Leave No Trace" program for climbing which discourages chipping or destroying rock for climbing purposes. Mojave National Preserve would monitor rock-climbing use levels and related activities in the coming years to determine the effectiveness of current management in achieving the previously mentioned goals and objectives.

Hunting, Trapping, and Fishing

Hunting would follow existing California Department of Fish and Game (CDFG) regulations except for the following: Hunting would be limited to game birds (mourning dove, quail, and chukar), deer, and bighorn sheep during their designated CDFG season, which usually is between September and the end of February. All hunting dogs must be in the owner's control and, other than for hunting upland game birds, must be on leash. Hunting is limited to daylight hours and must take place at least 500 yards away from campgrounds, buildings, Piute Creek, natural or artificial sources of water, the Desert Studies Center at Soda Spring, Granite Mountains Natural Reserve, and maintained roads or trails. Plinking (random target shooting) is not allowed.

Trapping is allowed, except within 500 yards of private property, campgrounds, Piute Creek, any natural or artificial sources of water, roads, and within 1 mile of the Desert Studies Center at Soda Springs and Granite Mountains Natural Reserve. Trapping would be permitted from September through February, with no use of leg traps be allowed, and trapping of nonpredators only. The superintendent could issue a permit for trapping in the above excluded areas and for other species if such activity was found to be administratively necessary.

Fishing would follow existing CDFG fishing regulations. The collection of nongame birds, reptiles, amphibians, and invertebrates would not be permitted under NPS regulations (CFR 36 2.2 b.4 & 2.5.a) without a valid NPS scientific collection permit.

ORGANIZED EVENTS

Organized events that involve seven or more vehicles or more than 15 people within the boundary of Mojave National Preserve would be required to obtain a special use permit from the National Park Service. The National Park Service would evaluate each event according to

current and appropriate environmental regulations and guidelines to determine if the organizers of the event would have to prepare an environmental impact statement or an environmental assessment for their proposed activity.

SIGNS

The philosophy on signs would be for them to be unobtrusive, used sparingly, and that they blend with the natural environment so that the undeveloped wild character and sense of exploration remains. The National Park Service would prepare a sign plan to ensure that this vision would be carried out. The sign plan would provide for directional signs to major points of interest, which are typically located on the major roads that carry most of the traffic. Secondary or backcountry roads would remain relatively free of directional signs. The intention would be to keep new visitors from becoming lost. Efforts would be made in the sign plan to use international symbols or other appropriate methods to keep signs simple and easily understood for the broad spectrum of visitors entering the parks. Because the desert can be unforgiving in the summer, emphasis would be placed in the sign plan for signs that could help protect the health and safety of visitors unfamiliar with the desert. A variety of media would also be used to minimize the proliferation of signs.

DEVELOPED CAMPGROUNDS

Ongoing improvements to campgrounds would continue as described for the no-action alternative, with additional improvements at Mid Hills to improve accessibility visitors with disabilities. If visitation significantly increased to the point where many visitors were being turned away during most of the peak season, a campsite reservation system would be considered. Locations for new semi-developed campgrounds with fewer services and smaller numbers of campsites would be considered. Campsites and trails in the Mid Hills campground would be redesigned over the coming years to increase the level of accessibility for people with disabilities and to resolve other concerns. Campsite densities would not be increased. There would be no changes to the Hole-in-the-Wall campground.

BACKCOUNTRY AND ROADSIDE CAMPING

Roadside camping would continue to be allowed in previously used areas. There are many of these campsites along dirt roads. The creation of new campsites would not be allowed. Visitors are encouraged to bring their own firewood and are not allowed to collect firewood in the preserve. Campfires would be allowed in existing fire rings, or visitors could use a fire pan. Backcountry structures on public lands would remain available to the public on a first come basis.

Mojave would prepare a backcountry/wilderness management plan when use levels or resource impacts warranted. Until the plan is completed, the preserve would manage roadside camping with the following regulations:

- Roadside camping would be allowed 0.5 mile beyond any developed area, paved road or day use area.
- Campsites must be more than 200 yards from any natural or constructed water source.
- Overnight group size would be limited to 15 people and no more than seven vehicles. Larger groups must contact a preserve office for a special use permit.
- Vehicles must remain in previously disturbed areas. Driving off roads would not be permitted.

Camping in Areas of Desert Tortoise Critical Habitat and Other Sensitive Areas

The National Park Service would adopt guidance provided by the Bureau of Land Management's plan for the East Mojave Scenic Area, which calls for an evaluation of camping areas within or adjacent to sensitive resources to determine if there is a need to relocate camping within the same general vicinity to protect resources. This might require the closure of some campsites. Further studies would be conducted to determine the limits of acceptable change that these areas could withstand while maintaining the desired cultural or natural resource conditions and a quality visitor experience. Campsites could be considered open unless designated as closed.

Camping at High Use Areas

The BLM management plan for the East Mojave Scenic Area called for the designation and marking of specific campsites in locations that are consistently heavily used by individuals or groups. It is proposed that this recommendation be adopted by limiting camping to designated campsites in high use areas. Resource conditions and visitor use would be monitored to determine the need for designating sites such as Caruthers Canyon, Cima Dome, Cinder Cones, Clark Mountain, Granite Pass (Kelbaker Road), and Grotto Hills. Other locations could be identified as information on visitor use was gathered. Campsites would be marked for easy identification by some means, but other improvements would be avoided unless proposed improvements would help protect resources.

VISITOR USE FEES

Fees and their use are determined in accordance with the criteria and procedures of the Land and Water Conservation Fund Act of 1965 (sec. 4, 16 U.S.C.A. 4601-6a (Supp., 1974) and section 3, Act of July 11, 1972, 86 Stat. 461), the Recreational Fee Demonstration Program (P.L. 104-134), and regulations in 36 CFR 71. The preserve would continue to explore options for fee collection revenues consistent with congressional direction.

The only visitor use fees collected in Mojave National Preserve, are camping fees for the Mid Hills and the Hole-in-the-Wall campgrounds and the group area at Hole-in-the-Wall. Fees are also collected for special use permits (such as filming, organized group outings, etc.). An entrance fee study would be prepared in the future.

COMMERCIAL SERVICES

No commercial services are proposed. A concession contract to operate a food service facility in the Kelso Depot (see appendix B) is being considered.

ROADS AND CIRCULATION

No changes would be made to the existing roads. Some limited improvement of heavily used roads might be undertaken when funds permitted, such as the recent addition of crushed rock to the Kelso Dunes access road. The county would continue to maintain the paved roads throughout the preserve, as well as the graded dirt Cedar Canyon, Black Canyon, and Lanfair Valley roads. An agreement is currently being drafted that would allow the county to utilize borrow sources in the preserve for road maintenance. The National Park Service maintains graded dirt access roads to the Soda Springs facilities, Kelso Dunes and Wild Horse Canyon road. High-clearance and four-wheel-drive (4WD) roads would not be maintained; however, emergency repairs might be undertaken following flash floods. Vehicle use in the preserve would be limited to street legal vehicles. No off-road driving would be permitted.

To provide detailed guidance for managing the preserve's road system, a road management plan may be prepared to evaluate the status of duplicate road sections, road surface conditions, and the level of maintenance. The management philosophy would be to enhance the visitor experience while providing for safe and efficient accommodation of park visitors and also protecting the natural and cultural environment. It also would include the need to provide a road system that would allow for a variety of driving experiences consistent with the purpose and significance statements of this unit of the national park system unit.

MOJAVE ROAD

The National Park Service would strive to maintain the experience of solitude, adventure, and a sense of exploration for visitors traveling the Mojave Road. NPS rangers would patrol the road to offer emergency assistance and protect cultural and natural resources. The National Park Service would work to educate unprepared visitors about the rough character of the road. The primary guides for route finding would be the traditional rock cairns, along with maps, guidebooks, or other media.

The road would remain open for street legal vehicles, mountain bikes, equestrians, and hikers. Interpretive information would be available at visitor and information centers to enhance the

public's understanding of features along the road. Information would stress proper low impact camping and travel techniques. The National Park Service would not grant business permits for commercial guided tours of the road to keep use levels down and avoid commercialization of the road.

Maintenance of the Mojave Road would be considered in a road management plan for the preserve. Under that plan, general guidance would be given to allow the Mojave Road to develop its own character with minor maintenance action until the plan was completed. Maintenance generally would be limited to repairs needed to allow continued passage by vehicles currently using the road. Opportunities to interpret significant features along the road would be considered. The National Park Service would seek partnerships with volunteer groups to help with maintenance of the road and other features in the road corridor.

Large groups with seven or more vehicles or more than 15 people would be required to camp at designated areas and obtain a special use permit. Areas that would be considered for large group use would be Grotto Hills, Willow Wash, Seventeen Mile Point, the southeastern edge of Soda Lake in the Cow Hole Mountains, and the area known as the Granites, which are southwest of Soda Lake. Other areas might also be considered. The number of large groups using the road would be managed through the special use permit system. The intent of this action would be to keep adverse impacts low and avoid conflicting demands for camping space. This proposal would be further addressed under a future backcountry or visitor use management plan.

Camping along the Mojave Road would be subject to management decisions made for roadside camping. Baseline information would be collected to determine use trends, the physical condition of the road, and conditions of natural and cultural resources adjacent to the road and at associated camping areas. When high use levels or inappropriate visitor behavior caused unacceptable impacts on the road or resources or negatively affected the quality of the visitor's experience, management actions would be taken to correct these problems. Standards for visitor use and resource conditions would be established after baseline information was gathered and evaluated in the backcountry or visitor use management plan.

TRAILS

The backcountry/wilderness management plan would address trail use by hikers, equestrians, bicycles, and visitors with disabilities. The plan would identify the type and intensity of trail development, including the number of signs, trails, and trailheads, long distance trails extending into Bureau of Land Management or California State Parks and other jurisdictions, and anticipated maintenance levels for developed trails. Wilderness areas are closed to use by mechanized vehicles but open for other uses, including use by wheelchairs in accordance with NPS policy. The backcountry wilderness management plan would consider the feasibility of designating dirt roads as bicycle routes. Roads closed to mechanized use by wilderness designation may be considered for use as hiking and equestrian trails. The plan would be guided by the goal of increasing the diversity of recreational opportunities for the above activities in appropriate locations. Until completion of the plan, all trails would be open for use

by hikers and equestrians, except where management problems were identified and restrictions needed to be established. Bicycles would be allowed on all open roads, but not on single-track trails, in wilderness, or off-roads.

TRAINS

If passenger train service resumes, the National Park Service would coordinate with Amtrak on the feasibility of placing NPS information and interpreters on trains and allowing passengers to stop at Kelso Depot. The National Park Service would support the communities of Barstow, Nipton, and Primm in the establishing passenger train stops at these locations, with the anticipation of also establishing a stop at the Kelso Depot. Where feasible and appropriate, the National Park Service would also support the concept of using rail as an alternative form of transportation for visitors entering the preserve.

ADMINISTRATIVE OPERATIONS AND FACILITIES

ADMINISTRATION

Headquarters for Mojave National Preserve would continue to be located at Barstow. Space would be available for the superintendent's office, administration, planning, visitor services, resource management, special uses, and other central administrative offices. The preserve would continue to evaluate building or leasing a new headquarters office in Barstow. Office space would be provided for staff in Baker, Needles, Hole-in-the-Wall, and Kelso.

The maintenance management plan would determine the level of and location of maintenance support operations for NPS facilities. The plan would be guided by the objective of keeping most support facilities outside the boundary. Locations for a central maintenance facility, possibly at Essex, Needles, or Baker, would be evaluated. In addition to an information center, Baker would become the interim central maintenance operation, taking care of most short-term maintenance needs. New facilities such as shops, enclosed storage, and offices might be constructed at the existing yard. A mobile maintenance operation would also be established to support maintenance throughout the preserve. The National Park Service would consider the option of contracting for some maintenance services if it would make economic and practical sense.

Fire protection services would continue to be managed in cooperation with the Bureau of Land Management and located at Hole-in-the-Wall. Because of the poor condition of facilities at Hole-in-the-Wall, some improvements may be made after the development concept plan is completed.

The existing location of the visitor contact station would be evaluated in a development concept plan for Hole-in-the-Wall and could be would be relocated or demolished if the appropriate. One objective of this concept plan would be to call for the design of facilities so that would be operationally efficient in their purpose, but visually secondary and complementary to the beauty

of the natural resources. Alternative energy sources such as solar electricity would be considered for facilities at Hole-in-the-Wall and other remote NPS locations of housing or operations.

Buildings may be acquired through donation or acquisition. An assessment would be made for possible future uses such as visitor contact stations, administrative facilities, employee housing or restoration as historical interpretive properties.

The preserve would explore the possibilities of sharing a highway equipment and materials staging yard at Kelso or Essex. Potential partners at the yard might be San Bernardino County Department of Transportation and Flood Control, and Union Pacific Railroad. The preserve would also explore the possibilities of a joint operation with California State Parks to share maintenance and other services.

EMPLOYEE HOUSING

The prime management direction for employee housing would be to rely on housing outside the preserve, whenever possible, and to take advantage of existing housing within the preserve. If existing homes in the preserve were acquired by government purchase or donation, the National Park Service would evaluate the historical value, management, and aesthetic needs, and the cost effectiveness of bringing these homes up to current standards. Standards and guidelines would include: current NPS housing guidelines, building codes, historic preservation guidelines and standards, accessibility and energy conservation. Housing might be renovated, replaced, or removed as appropriate. Before upgrading existing acquired homes or constructing new housing for employees, the National Park Service would evaluate the location of the housing and make a determination about whether private housing elsewhere within a one hour drive could serve the same need, and whether the total housing units are the minimum necessary to meet the mission of the preserve. New housing construction would be considered when the evaluation step determined that renovation was not practical from an economical or operational standpoint and that the home had no historic significance. The National Park Service would evaluate the feasibility of upgrading existing housing structures in the preserve to make them as energy-efficient as possible while upgrading the living conditions to meet current NPS housing guidelines. NPS employee housing would not be provided in Needles or Barstow; rather, employees would find housing on the open market.

When staffing levels exceed available NPS and private housing in Baker, new housing would be constructed to replace the existing double-wide trailers. Construction of new housing in Baker outside the existing yard would require appropriate approval and would depend on the availability of funding to buy private land to construct housing. Until then, the National Park Service would continue to upgrade the existing double-wide trailers where possible.

As space permitted, some of the upper rooms in the Kelso Depot might be used for employee housing and temporary quarters for staff conducting fieldwork. Additional housing for employees in the Kelso area would also be considered if proposed housing in the depot is found to be inadequate to support programs. Housing may also be provided at the Hole-in-the-Wall

area as positions are filled and adequate housing within a one-hour drive is unavailable outside the preserve.

SOLID WASTE DISPOSAL

Solid waste would continue to be hauled to an approved site. The Baker landfill was closed by state law in 1997 and is undergoing closure. Federal law prohibits new landfills in all units of the national park system.

EDUCATION AND RESEARCH CENTERS

Cooperative management agreements would be developed between the National Park Service and the California State University Consortium through the Trustees of the California State University (CSU) and the University of California (UC).

The following points would be proposed for the cooperative management agreements:

The National Park Service would enter into a cooperative management agreement with California State University to (a) lease the facilities at the Soda Springs Desert Research Center and (b) to provide for continuing California State University's research and educational activities in the Mojave Desert. The agreement would define each party's roles and responsibilities. The National Park Service would also enter into a Cooperative Agreement with the Regents of the University of California through the director of the University of California's Natural Reserve System to provide for continuing research and educational activities in the Mojave Desert at the Granite Mountains Natural Reserve. The National Park Service would seek a partnership with University of California to collaborate on research, interpretation and public education. The intent would be to increase public awareness and understanding of natural and cultural resources and ongoing research in the preserve. Research and educational activities of the University of California consistent with the provisions of this title and the laws generally applicable to units of the National Park Service would continue.

The National Park Service would be responsible for law enforcement, interpretation, visitor access, and the natural and cultural resource management program, including the area encompassed in the Soda Springs Desert Research Center and the Granite Mountains Natural Reserve once appropriate agreements are in place. In developing its resource management program, the National Park Service would work with the university and college to address issues and concerns associated with their research and educational activities in the preserve, the natural reserve, and with facilities management at Soda Springs Desert Research Center. The designated wilderness within the natural reserve would be managed for wilderness values.

The National Park Service would be responsible for the review and approval of all proposals for research on preserve lands to ensure that they conform to the requirements of its guideline *NPS-77 Natural Resource Management*, chapter 5, and the provisions of 36 CFR 2.5. The superintendent

would issue research permits. Research that conflicts with current approved research, including long-term study plots that failed to meet NPS standards, would not be approved.

Signs would be posted at highly accessible points of entry, including Zzyzx Road. The purpose of signing would be to define public access requirements and current interpretive programs or facilities. The National Park Service would manage and maintain the NPS visitor contact facility, its parking area, and the visitor picnic area. California State University would continue to maintain all facilities at the Desert Studies Center at Soda Springs except for the main entrance road from Interstate 15 to the facility gate, the interpretive shelter and associated parking lot, restrooms and path. Ranger-led tours of Soda Springs and some of the Zzyzx structures would be coordinated with California State University to minimize impacts on California State University operations. These tours might be provided times of the year when tour group size and frequency justified the use of NPS staff.

The NPS would work with the universities to ensure protection of research plots. The discharge of weapons in the natural reserve would continue to be prohibited by San Bernardino County ordinance and the National Park Service.

LAND OWNERSHIP AND USE

PRESERVE BOUNDARY AND AUTHORIZED ACREAGE

No changes in the boundary of the preserve are proposed. During the prolonged debate over the creation of the Mojave National Preserve the boundaries were subjected to considerable scrutiny and public debate. The National Park Service believes a comprehensive examination of potential boundary modifications at this time is unwarranted and should be delayed until the preserve has been able to manage the area with the existing boundaries for a time to determine if there are areas where adjustments are justified. The boundary map submitted to Congress reflects a more accurate total acreage of 1,589,165 acres included with the external boundary of Mojave.

The National Park Service intends to locate some facilities outside the preserve, consistent with the existing management direction and proposed actions identified in this plan. This would include, but is not limited to, the headquarters site in Barstow, visitor facilities in Baker and Needles and employee housing in Baker.

WILDERNESS

In 1964 Congress enacted the Wilderness Act, which [sec.2.(c)] defined wilderness as:

A wilderness, in contrast with those areas where man and his works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. An area of

wilderness is further defined to mean in Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological or other features of scientific, educational, scenic, or historical value (16 USC 1131).

In 1994, Congress enacted the California Desert Protection Act (CDPA), which designated 695,200 acres within the Mojave National Preserve as wilderness. The CDPA also modifies some provisions of the Wilderness Act. The following are the key provisions of the act related to wilderness:

- Native Americans may gain access to sacred sites in NPS or BLM wilderness, but such access must be consistent with the Wilderness Act [sec. 705.(a)].
- Federal reserved water rights are explicitly reserved for BLM and NPS wilderness [sec. 706(a)].
- Inholders have rights of adequate access for reasonable use and enjoyment in units of the national park system, including NPS wilderness and BLM wilderness [sec 708].

The process of “interpreting” the congressional wilderness boundaries and preparing the official maps and legal descriptions prescribed in sec. 602 of the CDPA would continue. The wilderness boundaries in Figure 2 reflect the preliminary final interpretation. Once completed, final wilderness boundary maps would be submitted to Congress. It is assumed that the actual wilderness acreage may deviate from the approximate acreage of 695,200 acres estimated in section 601 of the act.

The National Park Service would manage wilderness areas for the use and enjoyment of the American people in a way that would leave them unimpaired for future use and enjoyment as wilderness. Management would include the maximum statutory protection allowed for these areas, the preservation of their wilderness character, and the gathering and dissemination of information regarding their use and enjoyment as wilderness. Public use of wilderness may include recreation, scenic preservation, scientific study, education, conservation, historical use, and solitude. A separate backcountry/wilderness management plan would be prepared.

The Wilderness Act generally prohibits motorized equipment or mechanized transport in designated wilderness areas; however, it allows them “as necessary to meet minimum requirements for the administration of the area for the purpose of this Act.” The superintendent would administer wilderness lands in the preserve with the minimum disturbance to the area or its resources. This method of managing the wilderness area is often referred to as the “minimum tool concept.” All decisions pertaining to administrative practices and use of equipment in wilderness would be based on this concept. Potential disruption of wilderness character and resources and applicable safety concerns would be considered before, and given

significantly more weight than, economic efficiency. If some compromise of wilderness resources or character was unavoidable, only those actions that would have localized, short-term adverse impacts would be acceptable.

In 1995 the federal managers of the Mojave Desert adopted “Principles for Wilderness Management in the California Desert” as guidance for themselves and their staffs in the implementation of the Wilderness Act and the pertinent sections of the California Desert Protection Act. The managers represented the Bureau of Land Management (California Desert and Yuma Districts), the National Park Service (Death Valley and Joshua Tree National Parks and Mojave National Preserve) and the U.S. Fish and Wildlife Service (California State Supervisor). This interagency effort also provides some consistency in desert wilderness management.

LAND ACQUISITIONS

Department of the Interior policy requires that the National Park Service prepare a land protection plan for every unit of the National Park Service that has nonfederal lands or interests within its authorized boundary. A land protection plan for Mojave National Preserve is included in this document as appendix C. Detailed descriptions of the nonfederal lands and interests are also included there.

The National Park Service would seek funds to acquire private lands and interests in the preserve on the basis of priorities presented in the land protection plan (see appendix C). Private land in Lanfair Valley that contains single family homes would not be considered for acquisition unless offered by the owners. Private land in wilderness, habitat for threatened or endangered species, and riparian habitat would be considered high priority for purchase.

Whenever acquisitions of private land occurs, the parcel would automatically become part of the preserve and no boundary adjustment would be needed. Donations and exchanges of real property from willing sellers would be a priority, and third-party acquisitions from willing sellers would be encouraged. State school sections in the new lands are actively being exchanged by the Bureau of Land Management pursuant to the direction of the California Desert Protection Act.

FIGURE 3. LAND STATUS

(Back of Land Status Map)

MINERAL DEVELOPMENT ACTIVITIES

The preserve would administer mineral development activities under existing laws and regulations applicable to such activities. This action is the same as the existing management alternative. Please refer to that alternative for a complete description.

ABANDONED MINES

The legacy of past mining in the preserve has left 419 abandoned mine sites with possibly thousands of mine openings and workings. Preliminary observations indicate the problem is a significant land management issue that may deserve program status. The 1992 Western Region Directive WR-085, Management of Abandoned Mineral Lands outlines the framework for a park abandoned mine lands program. The National Park Service would conduct a comprehensive inventory of all Abandoned Mine Lands (AML) sites to serve as a basis for future planning and reclamation program implementation. The inventory would build upon existing information from the U.S. Geological Survey (USGS), Bureau of Mines, and BLM databases. Mines would not be reclaimed until evaluated for historical significance and integrity in compliance with the National Historic Preservation Act of 1980, as amended. The program goals would include eliminating physical safety hazards and hazardous materials; mitigation of adverse environmental impacts to park resources, including the restoration of landscapes, soils and vegetation; protection of important wildlife habitat such as bat habitat; and preservation of historic and cultural resources which may include stabilization of structures.

SAND AND GRAVEL FOR ROAD MAINTENANCE

Building materials (sand, gravel, cinders), geothermal resources, and oil and gas on federal lands are not available for extraction or sale. Use of borrow materials for road maintenance must conform to existing NPS policy, which requires materials to be obtained from sources outside the preserve unless economically infeasible. The preserve would finalize a cooperative agreement with the San Bernardino County for road maintenance and the use of borrow sites to maintain roads in the preserve.

GRAZING/RANGE MANAGEMENT

The privilege of grazing cattle on lands in the preserve would continue to be exercised at no more than the current (as of October 31, 1994) level subject to applicable NPS regulations, policies, and preserve management direction. The number of animal unit months (AUMs) for the portion of each grazing allotment in the Mojave National Preserve at the time of the signing of the California Desert Protection Act was as follows:

Clark Mountain	371
Colton Hills	2,877
Crescent Peaks	1,276
Gold Valley	1,152
Granite Mountains	4,475
Kessler Springs	7,615
Lanfair Valley	11,560
Piute Springs	0
Valley View	8,069
Valley Wells	853
TOTAL	38,248

The superintendent would determine appropriate use, restrictions, and grazing fees and those would be included in the permit. Grazing fees could be used for resource management and restoration projects in the preserve to mitigate grazing impacts. The National Park Service would allow appropriate maintenance of existing range developments and would issue special use permits to the holders of the areas previously referred to as grazing allotments by the Bureau of Land Management.

The California Desert Protection Act directs the secretary of the interior to make the acquisition of "base property" from willing sellers a priority above all other acquisitions in the preserve. If ranchers notify the superintendent of their willingness to sell base property, the superintendent would immediately notify the secretary of the interior of the priority acquisition and request Land and Water Conservation Fund funding from Congress. The preserve would also work with conservation organizations to purchase grazing permits or fee property from willing sellers. Once a grazing permit was purchased and the new owners (i.e. conservation organizations) requested retirement, it would be permanently retired. If allotments were purchased or retired, range developments eventually might be removed and site restoration undertaken, subject to environmental and cultural compliance, including a determination of national register eligibility and section 106 compliance on all cultural features over 50 years old. In 1997 the Crescent Peak allotment and its animal unit months (AUMs) were retired. Livestock grazing would no longer be an authorized use in retired areas.

FIGURE 4. GRAZING ALLOTMENTS

There are seven grazing allotments in the Mojave National Preserve that are managed jointly by the National Park Service and the Bureau of Land Management. These joint allotments are Valley View, Valley Wells, Kessler Spring, Granite Mountains, Lanfair Valley, Clark Mountain, and Piute Valley. Upon securing a buyer for a willing seller of an allotment where the majority of the allotment is on NPS lands, the NPS would work together with the Bureau of Land Management to retire the entire allotment.

The National Park Service would combine the portions of the Valley Wells and Valley View allotments that occur inside the preserve. The NPS portion of the Valley Wells allotment is in the western portion of the Clark Mountain area of Mojave National Preserve. The NPS portion of the Valley View excludes the BLM lands in the Mescal Range and those lands northeast of Nipton Road. The National Park Service would request that the Bureau of Land Management make a similar change in combining their portion of these allotments. This would provide for a more manageable allotment since each bureau would fully manage a single allotment instead of portion of two. Valley View would then be wholly managed by the National Park Service, while Valley Wells would be managed wholly by the Bureau of Land Management. The animal unit months (AUMs) for the NPS portion of the combined Valley View and Valley Wells allotments would be the Valley View AUMs (8,069) plus the Valley Wells AUMs (853) for a total of 8,922 AUMs. The lessee is the same for both Valley View and the Valley Wells allotments.

Where credible, published research studies demonstrate that grazing negatively impacts the desert tortoise, appropriate mitigating measures would be taken. There would be active monitoring of grazing during desert tortoise activity periods to observe impacts and if necessary, adjust grazing as appropriate.

A grazing management plan would be prepared for any active NPS grazing permit. This plan would contain guidance for monitoring range use, establishing appropriate grazing use, determining appropriate grazing fees, and covering other rangeland and resource protection and enhancement issues on all grazing permits. In addition to the grazing management plan, a community-based management team of ranchers, environmental organizations and park staff may be established to provide a forum for communications on range management practices. Additional AUMs would not be authorized for grazing on lands acquired by the preserve. These lands might include lands acquired by direct purchase from willing sellers, third-party acquisitions, and donations.

PLAN IMPLEMENTATION

OPERATIONAL COSTS

The existing operating base in FY98 is \$2.5 million and the existing staffing is 36. To fully implement the proposed action over the 10-15 year life of the plan, and assuming that the above itemized activities would be undertaken and visitor use increases, an additional 56 staff would be needed. This would require the addition of approximately \$2.6 million per year for salaries, benefits, and administrative expenses (space, utilities, vehicles, etc.).

The estimated costs of acquiring private lands and mining claims under this alternative are not yet available. No comprehensive evaluation of land acquisition costs has been undertaken in accordance with NPS policy and therefore cannot be estimated at this time. The cost of acquiring property involves title searches, appraisals, relocation costs, and fair market value of the property. These specific costs would be available only on a property by property basis and would need to be determined based on current market values. An approved cost estimate for the land protection alternative selected would be prepared at a later date by the Washington office.

TABLE 1: PROPOSED ACTION ALTERNATIVE COST SUMMARY

Activity	Gross Const. Costs	Const. Planning Costs	Total Project Costs	Phase
• Construct tortoise fencing (est. 100 miles) @ \$21,000/mile	\$2,100,000	\$525,000	\$2,625,000	I
• Removal of feral burros (1,800 animals @ \$1,200/burro)	N/A	N/A	\$2,160,000	I
• Renovate and upgrade acquired housing in preserve for employee use (per NPS housing standards - 5 units)	\$363,000	\$70,000	\$433,000	I
• Completely restore Kelso Depot, including utilities and historic landscaping	\$5,475,000	\$1,045,000	\$6,520,000	I
• Plan, produce and install museum exhibits at Kelso Depot	\$525,000	\$10,000	\$625,000	I
• Roadside displays/interpretive exhibits, including parking lot (five locations)	\$52,500	\$10,000	\$62,500	I
• Increase accessibility to campsites at Mid Hills campground (10 sites)	\$38,000	\$7,000	\$45,000	I
• Replace Soda Springs comfort station, shade structure, information display, and interpretive exhibits	\$193,000	\$37,000	\$230,000	II
• Develop one new 15-site semi-primitive campground with fire rings, picnic tables, and composting toilet	\$61,000	\$12,000	\$73,000	II

Activity	Gross Const. Costs	Const. Planning Costs	Total Project Costs	Phase
• Construct central maintenance facility (1,400 sq. ft. work bldg. with office, restrooms, vehicle yard)	\$285,090	\$54,000	\$346,000	II
• Replace or relocate HIW info center; enlarge fire dormitory and garage	\$1,516,000	\$290,000	\$1,806,000	II
• Construct new housing in Baker to replace existing mobile homes (3 units)	\$363,000	\$70,000	\$433,000	II
• Restore abandoned mine sites	\$5,240,000	\$1,000,000	\$6,240,000	III
TOTALS	\$16,211,590	\$3,148,000	\$21,739,000	

PHASES

- I 1-5 years
- II 6-10 years
- III Spread evenly over 15 years

Construction and planning cost estimates, provided in table 3, are conceptual estimates only. These are costs of similar types of facilities and past NPS experience derived from contract data. The estimates include indirect costs added to cover such things as design services, contract supervision, and contingencies. They also take into account the cost of contracting for such services in a remote setting, seasonal constraints, labor availability, and wage rates. The planning costs are calculated at 25 percent of gross construction costs and cover site-specific project planning and compliance. The costs are based on 1998 values.

ALTERNATIVE 2: EXISTING MANAGEMENT (NO-ACTION)

GENERAL DESCRIPTION

This alternative describes the existing management approach that the National Park Service has been following since passage of the CDPA in October 1994. These actions are typically referred to as the status quo or the no-action alternative, since this is what would occur if the agency took no further action. Since Mojave is a relatively new unit of the national park system, no general management plan is in place. Most of the actions are interim policies that are being followed until a management plan is approved.

NATURAL RESOURCES

AIR QUALITY/VISIBILITY/NIGHT SKY/NOISE/WATER RESOURCES

The preserve reviews and comments on adjacent project proposals as they became aware of them. No systematic monitoring of air, water, night sky, or noise is currently underway, and none is planned at this time.

WATER RESOURCES

Same as proposed action except for the following:

Water Developments

Maintenance of existing guzzlers, livestock tanks, and troughs in Mojave National Preserve is provided for with the superintendent's approval. Motorized access to guzzlers in wilderness for the purpose of maintenance or replenishment of water is reviewed individually.

Water Rights

State records in Sacramento have been searched to identify outstanding water rights (see appendix C: "Land Protection Plan" for a list). Mojave has enlisted the assistance of water resource specialists to take necessary steps to convert water rights held in the name of the BLM to NPS records.

SENSITIVE SPECIES

A preliminary list of species of special concern in the preserve is included in appendix C. The NPS would continue to gather information on the distribution, abundance, and threats related to these species through cooperative efforts with universities. These species would be considered in all compliance action, and steps taken to protect habitat to ensure their preservation.

The desert tortoise and its critical habitat are managed indirectly through other activities and resources such as hunting, grazing, burros, and other land uses. Special use permits and environmental compliance activities typically include stipulations for the protection of the tortoise. Mojave has developed a programmatic agreement with FWS for the desert tortoise for routine activities in the preserve. This agreement allows certain specified activities and a minimal amount of disturbance to occur without the need to formally consult with FWS on each action. Consultation with the FWS on other listed species occurs for each activity.

No changes in the management of the Mohave tui chub are proposed. The artificial pond population at Soda Springs would be maintained in cooperation with U.S. Fish and Wildlife Service, the California Department of Fish and Game, and the Desert Studies Center consortium as one of a few artificial populations of the species.

INTRODUCED SPECIES

The preserve is actively pursuing the removal of nonnative tamarisk and burros. Burros are being managed at pre-CDPA BLM prescribed levels (130 burros) under an existing agreement with the Bureau of Land Management. The burro census in 1996 indicated that an estimated 1,400 burros were present in Mojave National Preserve. The FY97 capture and adoption effort was successful with the removal and placement of 600 burros for adoption. This removal program would continue, provided adequate funding could be obtained.

Tamarisk eradication efforts would continue to identify areas where individuals of *T. ramossisima* are gaining a foothold. Planted tamarisk (*T. aphylla*) along the railroad corridor through the preserve are not believed to pose a threat. No other introduced species are being removed. However, as resource monitoring efforts highlighted other problems or research provided solutions to known problems, funding would be sought for eradication programs.

DISTURBED LAND RESTORATION

The National Park Service would continue to work to remove hazardous materials from several sites in the preserve. In addition, restoration of the AT&T cable route is planned to begin after removal of the cable in late 1998. No other restoration efforts are underway. Any new development proposal that would involve disturbance such as mining or pipeline construction would be required to restore the land.

NATIVE SPECIES RESTORATION

No ongoing efforts are being made to reintroduce extirpated native species.

FIRE MANAGEMENT

The fire policy would continue to be to suppress all fires in the preserve until fire history and effects studies were completed. These studies would provide data for determining whether to provide for natural and prescribed fires to burn in the preserve.

PALEONTOLOGICAL RESOURCES

There is no active program in effect to gather data or interpret resources, and none would be instituted under the no-action alternative. Scientific research would continue to be conducted by entities other than the National Park Service, and no comprehensive report or database would be prepared. Resource protection would continue to consist of random patrols of the backcountry.

CAVE RESOURCES

No management action is currently being taken on cave resources.

INVENTORYING AND MONITORING

Management of the preserve's resources is currently guided by direction provided in the enabling legislation and NPS regulations and policies. Development of a natural and cultural resource management plan is underway that would provide further guidance for this program. The staffing and funding for this program would remain at the current level, with modest increases possible through special initiatives. Project priorities would be determined on the basis of existing staff availability and funding. A strategic plan would be prepared annually that provides goals, objectives, and annual work plans. The strategic plan would also establish five-year goals that would allow some limited view of resource issues and allocation of staffing and funding.

CULTURAL RESOURCES

Cultural resource management would continue to be focused on NPS compliance efforts to meet the requirements of the National Historic Preservation Act and the National Park Service's *Cultural Resource Management Guideline*, release no. 4, September 23, 1994.

Cultural resource management programs would continue to be: (1) collecting data and inventorying of archeological sites, ethnographic resources, and historic properties; (2) preparing and updating the list of classified structures; and (3) preparing cultural resource studies.

Limited NPS protection of some archeological sites and ruins would continue. Limited monitoring of resources by ranger patrols would continue, with remedial actions focused primarily on sites in high use areas.

Cultural resources, including archeological sites, ethnohistoric resources, and historic properties, would continue to be evaluated under criteria for listing on the national register on a project-specific basis. Historic properties listed on, or determined eligible for listing on, the National Register of Historic Places would continue to be afforded stabilization/preservation treatment as funding allowed, with preservation efforts focused primarily on key resources in high-use areas.

NATIVE AMERICAN INTERESTS

Consultation and coordination with historically associated tribes would be conducted on specific projects as the need arises, in adherence to departmental directives and NPS policies. Relationships with some tribes in the area have begun and would continue. There is no consultation plan to provide guidance on when and what issues to consult on, for pursuing research, and on documentation of ethnographic resources and traditional use areas and sites.

VISITOR USE, SERVICES, AND FACILITIES

Staffing and funding for visitor services and maintenance of facilities would to remain at approximately constant levels. Some special initiative projects, repair and replacement funds, and routine cyclic maintenance funding would be anticipated.

INTERPRETIVE AND ORIENTATION PROGRAM

There is no overall interpretive plan in place. Interpretation programs operated in and out of information centers in Baker, Needles and Hole-in-the-Wall would continue. Ranger-led walks and talks would continue at various locations in the preserve.

INTERPRETATION AND ORIENTATION FACILITIES

The existing NPS visitor contact centers at Baker and Needles would continue to serve as the initial visitor contact points, providing the public with information on desert travel and recreation opportunities. The Hole-in-the-Wall visitor contact center would continue to be the

only NPS facility in the preserve with a staffed ranger presence. Staffing at the ranger station would continue on a seasonal basis and as NPS staff or volunteers were available.

Kelso Depot

Funding is being sought to stabilize Kelso Depot to protect it from further deterioration and to provide fire and security protection. However, the interior of the depot would not be opened for public use. Interpretation of the depot would be by exterior exhibits and interpretive panels. Historic landscaping would be restored; parking lots and a comfort station would be built (see appendix B: Kelso Depot Development Concept Plan).

ROAD AND TRAILSIDE DISPLAYS

Planning would continue for roadside pullouts and entrance signs to be located along major highway entrances to the preserve. These pullouts, which would have information displays to orient visitors and provide an overview of major features, would include notes on travel safety. NPS staff would continue to work with community groups and schoolteachers in Baker, Needles, and elsewhere to provide these groups with information on the preserve.

No major new facilities would be added, although minor upgrades, relocations and redesign might be undertaken through site-specific planning efforts.

EDUCATION AND OUTREACH

NPS staff would continue to work with local schools to provide information and assistance with education programs. University of California and California State University would continue to develop and sponsor separate classes in the preserve. The preserve's staff would continue working with university research centers to offer current information on the natural and cultural resources.

DAY USE AREAS

There are no areas currently designated for day use only.

RECREATIONAL DAY USE ACTIVITIES

Rock-Climbing

Climbing activities would continue to be managed under NPS policy and regulations.

Hunting, Trapping, and Fishing

Hunting, trapping, and fishing would continue under CDF&G hunting regulations. The collection of non-game birds, reptiles, amphibians, and invertebrates would not be permitted under NPS regulations (CFR 36 2.2 b.4 & 2.5.a) without a valid NPS scientific collection permit. Plinking (random target shooting) is not permitted.

SIGNS

Existing signs would be evaluated for retention, modification or removal. Few new signs would be added. Entrance signs are being constructed at all the major entrance points to the preserve.

DEVELOPED CAMPGROUNDS

Mid Hills and Hole-in-the-Wall campgrounds would continue to provide a total of 61 campsites for a variety of recreational vehicle (RV) and tent camping opportunities. The group area at Hole-in-the-Wall would continue to offer facilities for equestrian use. Efforts to improve restrooms, campsites, and the water system at Mid Hills would continue. Both campgrounds would continue to be open year round and no reservations would be required. Hole-in-the-Wall campground has a significant level of accessibility for visitors with disabilities. No expansion of developed campgrounds or creation of new ones is planned.

BACKCOUNTRY AND ROADSIDE CAMPING

Roadside camping continues to be allowed only in previously used areas. Many such sites exist along dirt roads. The creation of new campsites is prohibited. Collecting firewood is not allowed in the preserve. Campfires are allowed in existing fire rings or in portable fire pans. Most backcountry structures on public land are available for public use with no restrictions.

VISITOR USE FEES

The collection of camping fees at Hole-in-the-Wall and Mid Hills campgrounds would continue. No entrance fees would be collected.

COMMERCIAL SERVICES

No commercial services or concessions contracts exist and none are anticipated. Special use permits would continue to be granted individually for commercial services such as guided tours and hunting guide services.

ROADS AND CIRCULATION

No changes would be made in existing roads. Some limited upgrading of heavily used roads may be undertaken as funds permitted. For example, crushed rock might be added to roads, as was done recently on the Kelso Dunes access road. The County would continue to maintain the paved roads throughout the preserve, as well as the graded dirt Cedar Canyon, Black Canyon, and Lanfair Valley roads. The National Park Service would continue to maintain graded dirt access roads to the Soda Springs facilities, Kelso Dunes, and Wild Horse Canyon road. High clearance and four wheel drive backcountry roads still would not be maintained; however, emergency repairs might be undertaken following flash floods. Vehicle use in the preserve is limited to street legal vehicles and no off-road driving is permitted.

MOJAVE ROAD

The Mojave Road would continue to be open for use, with limited restrictions on the type of use it receives. Motorcycles would continue to be allowed on the road. Vehicles must be street legal. Camping along the Mojave Road would continue to be managed under the restrictions of the preserve's interim management policies, which cover roadside camping, campfires, and other related activities. Business permits would continue to be granted for appropriate commercial tours on the Mojave Road. Special use permits would continue to be required for large groups and organized events anywhere in the preserve. The National Park Service would not maintain Mojave Road, but would seek agreements with private groups for volunteer maintenance. No directional signs or interpretive panels would be installed along the Mojave Road.

TRAILS

There would be no trail planning or development under this alternative. No trailheads or parking areas for trail use would be added.

TRAINS

Passenger train service through the preserve was discontinued by Amtrak in 1997. Mojave has no programs in place to seek visitor access by train under this alternative. Freight trains continue to use the railroad lines that traverse the preserve.

ADMINISTRATIVE OPERATIONS AND FACILITIES

ADMINISTRATION

Headquarters would continue to be located at Barstow. The maintenance operation would continue to be overseen from Barstow, with satellite offices in Baker and Hole-in-the-Wall. The new Baker facility would be the main field office and shop. A field office for maintenance, visitor protection, and interpretation staff would be added for the Baker housing and maintenance yard. Improvements would continue to be made to this facility to increase its capability to provide services. The Hole-in-the-Wall operation would be improved somewhat but would remain a secondary support facility. Fire protection services would continue to be located at Hole-in-the-Wall, in cooperation with the Bureau of Land Management.

EMPLOYEE HOUSING

No additional employee housing would be added in the preserve. Several NPS-owned houses in the preserve are unsuitable for employee housing. The cost of upgrading homes to meet NPS housing requirements would be evaluated, and where conditions warranted, some houses might be adapted for employee housing. Before upgrading existing acquired homes or constructing new housing for employees, the preserve would evaluate the location of the housing and make a determination about whether private housing elsewhere within a one hour drive could serve the same need. Employee housing would not be provided in Needles or Barstow. Since housing in Baker is limited, employees would continue to occupy NPS-owned double-wide mobile homes. New housing at Baker would not be constructed if adequate private housing became available in the community. Dormitory-style housing for a crew of 16 would remain inadequate at the Hole-in-the-Wall fire center. The total housing units would be the minimum necessary to meet the mission of the preserve.

SOLID WASTE DISPOSAL

Solid waste would continue to be hauled to an approved site outside the preserve. In 1997, state law required closure of the Baker landfill. Federal law prohibits new landfills in any unit of the national park system.

EDUCATION AND RESEARCH CENTERS

The Granite Mountains Natural Reserve and the Desert Studies Center at Soda Springs operate under informal agreement with the preserve. The National Park Service has been working to develop cooperative management agreements with the California State University Consortium through the Trustees of the California State University (CSU) and the University of California. Research and educational activities consistent with the provisions of this title and the laws

generally applicable to units of the National Park Service would continue. No restrictions exist for visitor use of public lands. CSU would continue to maintain all facilities at Soda Springs except the main entrance road from Interstate 15 to the facility gate, the interpretive shelter and associated parking lot, restrooms, and the path. A nomination form for the Soda Springs Historical District is being prepared for the National Register of Historic Places. If accepted on the register, management of the facility could be affected. The discharge of weapons would continue to be prohibited in Granite Mountains Natural Reserve by San Bernardino County ordinance.

LAND OWNERSHIP AND USE

The preserve regulates nonfederal rights on federal lands through existing National Park Service and other regulations, as described below.

PRESERVE BOUNDARY AND AUTHORIZED ACREAGE

Section 502 of the California Desert Protection Act established the preserve and designated the authorized acreage at approximately 1,419,800 acres. The Congressional maps delineating the boundary of the preserve and referred to in section 502 are dated May 17, 1994, are often commonly called the “S-21 Maps.” This set of 21 map sheets provided the basis for the preparation of the official boundary maps and legal description by the NPS (see appendix C of the land protection plan). The National Park Service prepared the official boundary maps (seven map sheets dated July 1996) according to the section 504 and submitted them to Congress in August 1996, completing the process of preparing official boundary maps of the Preserve. These maps are on file with the superintendent for inspection (see Figure 2).

The authorized acreage of the preserve identified in section 502 was an estimate based on calculations done manually, and may have excluded private lands in Lanfair Valley. Creation of a digital boundary allowed the acreage to be more accurately calculated. The boundary map submitted to Congress reflects a more accurate total acreage of 1,589,165 acres of land included within the external boundary of Mojave. The land protection plan (appendix C) provides a breakdown of the land ownership.

The National Park Service intends to locate some facilities outside the preserve, consistent with the existing management direction and proposed actions identified in this plan. This would include, but is not limited to, the headquarters site in Barstow, visitor facilities in Baker and Needles and employee housing in Baker.

WILDERNESS

The process of delineating final wilderness boundaries is provided in title VI of the CDDPA. This process of “interpreting” the S-21 wilderness boundaries is nearly complete. The

wilderness boundaries in Figure 2 reflect the preliminary final interpretation, however, the legal descriptions have not yet been prepared. Once completed, final wilderness boundary maps would be submitted to Congress. It is assumed that the actual wilderness acreage may deviate from the approximate acreage of 695,200 acres estimated in section 601 of the act.

The focus of wilderness management would continue to be on occasional overflights and other monitoring efforts to identify illegal uses. Wilderness would be considered in all compliance and permitting actions and appropriate mitigation would be applied.

LAND ACQUISITION

Under this alternative the preserve would continue the present course, which is to regulate nonfederal rights through existing National Park Service or other regulations. National Park Service purchase of private land is not an ongoing or active program, but it might occur on an opportunity basis from willing sellers. Donations and exchanges would be pursued from willing sellers if funding permitted, and third-party acquisitions from willing sellers would be encouraged. State school sections are actively being exchanged by the Bureau of Land Management pursuant to the CDPA direction.

MINERAL DEVELOPMENT ACTIVITIES

The preserve was established by Congress with the provision that mining activities may occur on valid existing claims under all applicable laws and regulations administered by the National Park Service (sec. 508). The Mining in the Parks Act of 1976 (P.L. 94-429) prescribed that all activities resulting from the exercise of valid existing rights on patented and unpatented mining claims within any unit of the national park system shall be subject to regulations developed and administered by the National Park Service. The regulations governing mining on all patented and unpatented claims in park units are found at 36 CFR Part 9A, which requires operators to file a plan of operations with the National Park Service for all mineral related activities. Proposed mining operations must also meet the approval standards provided in the regulations and post a performance bond equivalent to the cost of reclamation before an operation may proceed.

The CDPA also imposes a requirement that validity of unpatented claims be determined prior to approval of any operation (sec. 509). It also requires analysis of the environmental consequences of mineral extraction and the estimated acquisition costs, and the submission to Congress of recommendations on whether any valid or patented claims should be acquired.

Congress closed Mojave to all new mining claim location and all other forms of appropriation and disposal. Section 507 of the CDPA withdrew the area from all forms of entry, appropriation or disposal under the public land laws; from location, entry and patent under the United States mining laws; and from disposition under all laws pertaining to mineral and geothermal leasing and the sale of mineral materials. This provision of the act is subject to valid existing rights.

The National Park Service also regulates mineral development on valid nonfederal oil and gas interests in accordance with 36 CFR Part 9B. This involves property where the surface is held by the federal government, but the mineral rights were retained by the private party when the land was acquired.

Whenever a proposed mineral development fails to meet the regulatory approval standards and no alternative development scenario is feasible, the National Park Service would initiate acquisition of the mineral rights.

ABANDONED MINES

The preserve has an inventory of abandoned mining properties that was generated from existing information in U.S. Geological Survey (USGS) and Bureau of Mines databases. Additional surveys are currently underway to further inventory abandoned mineral properties. The National Park Service is working to remove hazardous materials from several sites in the preserve.

SAND AND GRAVEL USE FOR ROAD MAINTENANCE

Building materials (sand, gravel, and cinders), geothermal resources, and oil and gas on federal lands are not available for extraction or sale. Use of borrow materials for road maintenance must conform with existing NPS policy, which requires materials to be obtained from sources other than the preserve unless it is economically infeasible. The preserve is preparing a cooperative agreement with the San Bernardino County to allow limited use of existing borrow sites to maintain roads in the preserve.

GRAZING/RANGE MANAGEMENT

The Mojave National Preserve's enabling legislation contains the following statement:

The privilege of grazing domestic livestock on lands within the preserve shall continue to be exercised at no more than the current level subject to applicable laws and National Park Service regulations.

The "current level" is defined for each allotment as the number of AUMs authorized for that allotment within the Mojave National Preserve upon its establishment on October 31, 1994, the day the legislation was signed into law by the President.

The National Park Service has issued special use permits to five ranchers for continuation of grazing cattle on ten previous BLM grazing allotments that are now partly or wholly within the boundary of the preserve. The allotment boundaries, AUMs, and the rules and restrictions (season of use, supplemental feeding, forage utilization levels) are the same as those that existed when the Bureau of Land

Management managed the preserve lands before the passage of the California Desert Protection Act in October, 1994. Seven of the allotments have boundaries that are on federal land managed partly by the National Park Service and partly by the Bureau of Land Management.

The National Park Service monitoring of the range or ranchers' compliance with permit conditions, is currently limited. The rancher's pay grazing fees to the National Park Service based on the BLM fee schedule (\$1.35/AUM or a total for all 10 allotments of about \$50,000/year). The preserve would continue to handle requests for the replacement or installation, of range improvements with assistance from other units of the national park system.

Grazing is allowed under the existing U.S. Fish and Wildlife Service's Biological Opinion on the Desert Tortoise, amended in March 1997, until this plan is completed or April 2000, whichever occurs first. The U.S. Fish and Wildlife Service concluded in its opinion that the NPS interim livestock grazing program would not be likely to destroy or adversely modify designated desert tortoise critical habitat because of the following:

1. The National Park Service would continue to permit grazing under its current program while preparing a management plan, with formal consultation with the U.S. Fish and Wildlife Service before the plan was approved.
2. The adverse effects of the proposed grazing program on desert tortoise critical habitat have been minimized by the implementation of the terms and conditions of existing biological opinions (see pp. 14-21, FWS 1994; pp. 19-29 FWS, 1994A, and pp. 24-32 FWS 1993).
3. In addition to the measures already implemented to minimize the effects on tortoises and their critical habitat, the National Park Service would continue to implement recovery actions for the desert tortoise (e.g., acquiring private and state land and retiring grazing privileges) while the plan is being prepared.

The Endangered Species Act directs federal agencies to use their authority to further the purposes of the act by carrying out conservation programs for the benefit of endangered and threatened species.

The U.S. Fish and Wildlife Service recommends that the following measures be implemented:

1. Until completion and approval of the plan, the National Park Service should ensure the removal of as many of the following human activities detrimental to the desert tortoise as possible: (a) off-road vehicle (ORV) activities, (b) competitive and organized events, (c) landfills and any other surface disturbance that would diminish the capacity of the land to support desert tortoises, (d) grazing by cattle, (e) grazing by burros, (g) harvesting of vegetation, (h) dumping and littering, (release of captive or displaced desert tortoises, and (j) collection of wild desert tortoises.

2. The National Park Service should close and rehabilitate of unnecessary roads within critical habitat.
3. The Bureau of Land Management and the National Park Service should initiate or complete studies to quantify the destruction of tortoise burrows and trampling of tortoises by livestock.

PLAN IMPLEMENTATION

Under this alternative, priorities for allocating staff and funding are determined year by year according to the strategic planning process. The preserve's strategic plan sets five-year planning goals, but these are revised and adjusted yearly. Staff and funding would be adjusted as needed to place resources where most appropriate to meet the demands. Activity level planning would be pursued, with most of the identified plans being completed within five years.

Funding would be pursued from a variety of special funds (both governmental and private) to provide resources for accomplishing the goals and objectives of the strategic plan and activity plans. This approach would result in an unpredictable implementation schedule.

The existing preserve operating base in FY98 is approximately \$2.5 million.

TABLE 2: NO-ACTION ALTERNATIVE EXISTING STAFFING

FUNCTION	EXISTING STAFFING
Management team	3.0
Administration team	6.0
Resource mgmt. team	5.0
Visitor services team	9.0
Special uses team	5.0
Maintenance team	4.0
Fire management*	4.0
TOTAL	36.0

*In FY99 the fire management program includes one permanent subject-to-furlough and six seasonal (6 month) positions hired by the National Park Service. The Bureau of Land Management also provides 6 seasonal positions. The entire program is funded with FIREPRO money and is not included in the preserve operating base. The annual cost in FY98 was \$144,626.

ALTERNATIVE 3: OPTIONAL MANAGEMENT

GENERAL DESCRIPTION

This alternative is the same as the proposed action except that it provides for a greater emphasis on visitor services and facilities. However, this alternative does not include restoration of the depot, allowing those funds to be utilized for other visitor facilities. Only those sections that are different from the proposed action are included below.

VISITOR USE, SERVICES, AND FACILITIES

INTERPRETIVE AND ORIENTATION PROGRAM

Increased contact between NPS interpretive rangers and visitors would be sought to raise visitors' understanding of the preserve. There would be more focus on guided interpretation than in the proposed action.

INTERPRETATION AND ORIENTATION FACILITIES

The National Park Service would try to work with other federal land management agencies to establish multiagency staffing of information centers at Baker and Needles. This could provide more diversity and depth to the information available to the public. A new information center might be constructed or leased at Baker if the addition of other agencies resulted in a need for a larger building.

Kelso Depot

Funding would be sought to protect Kelso Depot from fire, earthquakes, and further deterioration. The interior would not be open for use. The depot would be interpreted through exterior exhibits and interpretive panels. A staffed information center may be added to serve visitors. Historical landscaping would be restored. Permanent comfort stations may also be added and parking areas better defined (see appendix B: Kelso Depot Development Concept Plan).

ROAD AND TRAILSIDE DISPLAYS

This alternative would increase emphasis on wayside exhibits and interpretive displays to educate the public on the significant resources in the preserve. There would be more focus on guided interpretation than in the proposed action. Visitors would receive more direction and

information in the field, with less emphasis on exploration and self-discovery than in the proposed action. Trailhead parking displays would be established as needed.

EDUCATION AND OUTREACH

Soda Springs

Education and outreach at Soda Springs would be the same as under the proposed action except that the interpretive plan might include ranger-guided tours of key features at Soda Springs. A small facility to support a staffed interpretive program would be built to serve visitors directed here from Interstate 15. Interpretation could focus on the history and natural history of Soda Springs and Zzyzx. The facility would initially be staffed only during periods of heavy use, with the frequency of staffing increasing if visitation increased. A development concept plan would be prepared to coordinate proposed and existing visitor facilities. The preserve would increase its use of the Soda Springs facilities for visitor and administrative functions.

Hole-in-the-Wall

In addition to the actions included in the proposed action, the interpretive and development concept plans would include consideration of a nature center to serve the children of overnight campers or day use visitors. It could also serve groups staying overnight at the group camping area. The size of this center would be scaled to the anticipated use levels and might be a section of the relocated ranger station/contact station. This facility could complement the preserve's outdoor education programs. Interpretive trails might be created and tied to the nature center to provide additional opportunities for field education. NPS staff would coordinate with staff at Providence Mountains State Park on interpreting the local resources.

RECREATIONAL DAY USE ACTIVITIES

Hunting, Trapping, and Fishing

Hunting, trapping, and fishing under this alternative would be the same as the proposed action, except there would be no restrictions on species hunted or trapped. Dogs could be used in accordance with CDF&G regulations.

DEVELOPED CAMPGROUNDS

If visitation and demand for campsites increased, the number of campsites in developed campgrounds would be increased, but the density would remain the same. Locations for a group campground at or near to the Mid Hills campground would be considered to provide a cooler summer alternative to the Hole-in-the-Wall group area. Some aspects of campground management could be contracted out to the private sector to reduce future NPS workloads.

BACKCOUNTRY/ROADSIDE CAMPING

Camping in Areas of Desert Tortoise Critical Habitat, Mines, Cultural Sites, and Other Sensitive Areas

In sensitive areas designated as critical habitat for the desert tortoise, vehicle-based roadside camping would be confined to a limited number of designated campsites with metal fire rings or campsite markers to identify them for use. Previously used areas would be considered first for designation. The designation of campsites would come after an inventory of natural and cultural resource conditions and existing campsites to determine the best locations. Campsites would be considered closed unless designated.

Camping at High Use Areas

Highly used areas would be improved by such additions as metal fire rings and picnic tables at each campsite except along the Mojave Road. Other improvements such as restrooms and vehicle barriers might be added later to reduce adverse impacts on natural resources. These semi-developed campgrounds usually would not have water, trash receptacles, or paved roads.

ROADS AND CIRCULATION

MOJAVE ROAD

Business permits would be allowed for commercial guided tours of the Mojave Road. Large groups would be allowed to camp in any disturbed area along the Mojave Road corridor after they obtain a special use permit. The National Park Service would use this permit system to manage use of the road so that the quality of the experience could be protected from problems associated with too many vehicles on the road at a time in any given area. The number of groups using the Mojave Road would be limited to minimize impacts on the road and campsites. To protect the Mojave Road, the National Park Service would also limit the number of vehicles allowed to travel the road each year. This limit would be created within the first few years after this plan is completed. The limit would be based on an evaluation of the condition of social, cultural, and natural resources with no more than 1,000 vehicles added to the annual number of vehicles using the road at the time of the evaluation. This limit would be reevaluated and adjusted as needed. The final management of use of the road would be determined in the backcountry/wilderness management plan.

ADMINISTRATIVE OPERATIONS AND FACILITIES

ADMINISTRATION

In addition to the information center in Needles, office space would be provided on the east side of the preserve to serve resource management, visitor services, and maintenance functions.

EMPLOYEE HOUSING

The focus of this alternative would be to construct new housing in the preserve to place employees close to their work. Less emphasis would be placed on rehabilitating existing buildings that the government might acquire by purchase or donation. If it was determined that renovation would not be cost-effective, new construction would be undertaken. Before upgrading existing acquired homes or constructing new housing for employees, the preserve would evaluate the location of the housing and make a determination about whether private housing elsewhere within a one hour drive could serve the same need, and whether the total housing units are the minimum necessary to meet the mission of the preserve.

EDUCATION AND RESEARCH CENTERS

Coordination between the University Consortium and the National Park Service would be sought to minimize conflicts between guided tours and research or education activities.

The National Park Service and the University Consortium would develop a cooperative program for educating and informing the public on the purpose of Granite Mountains Natural Reserve and the need for resource protection and respect for long-term research plots in the natural reserve. Unstaffed entry stations would be placed at key entry points to public use areas adjacent to and in the natural reserve. Each station would contain features such as bulletin boards where visitors could get information on the natural reserve's purpose and research activities and resource protection standards for the use of the natural reserve. Visitors would be asked to self-register at these stations on a voluntary basis to give the National Park Service information about visitor use.

The National Park Service would work with the University Consortium to monitor sections of the natural reserve that receive public use to determine if adverse impacts related to visitor use were occurring. Information gathered from visitor use registers and resource surveys would be used to support future management decisions intended to preserve the quality of the natural and cultural resources.

LAND OWNERSHIP AND USE

LAND ACQUISITION

Private land or interests would be acquired only on an opportunity basis, such as if the National Park Service were approached by a landowner wanting to sell, or if a development project would adversely affect park resources, aesthetics, or solitude. The exchange for state school sections would continue.

MINERAL DEVELOPMENT ACTIVITIES

The preserve would administer mineral development activities under existing laws and regulations applicable to such activities. This action is the same as the existing management alternative. Please refer to that alternative for a complete description.

The preserve would also undertake a sensitive resource analysis based on an objective analysis of physical, biological, cultural and visitor use values relative to projected mining impacts. This analysis would examine potential mineral development scenarios that would be likely to occur on each property based on the deposit, and assuming operator performance standards and specific mitigation would be applied to protect resources and values. The results of this analysis would be used to identify areas of the preserve where mineral development would be inconsistent with the mission of the preserve and likely mineral development may not be able to meet 36 CFR Part 9A or 9B approval standards. In these areas, funding to acquire valid outstanding mineral rights would be pursued.

GRAZING/RANGELAND MANAGEMENT

Grazing would be managed in the same way as the proposed action, except as presented below:

- Limited new range developments might be permitted, and replaced when necessary.
- No community-based grazing management team would be sought.

PLAN IMPLEMENTATION

OPERATIONAL COSTS

The existing preserve operating base in FY98 is \$2.5 million and existing staffing is 36. In order to fully implement the proposed action over the 15 year life of the plan, and assuming that above itemized activities are undertaken and visitor use of the Preserve increases, an additional 57 staff would be needed. This would require approximately \$2.7 million per year for salaries, benefits and administrative expenses (space, utilities, vehicles, etc.).

The estimated costs of acquiring private lands and mining claims under this alternative are not yet available. No comprehensive evaluation of land acquisition costs has been undertaken in accordance with NPS policy and therefore cannot be estimated at this time. The cost of acquiring property involves title searches, appraisals, relocation costs, and fair market value of the property. These specific costs would be available only on a property by property basis and would need to be determined based on current market values. An approved cost estimate for the land protection alternative selected would be prepared at a later date by the Washington office.

TABLE 3: OPTIONAL ALTERNATIVE COST SUMMARY

Activity	Gross Const. Costs	Const. Planning Costs	Total Project Costs	Phase
• Construct tortoise fencing (est.100 miles) @ \$21,000/mile	\$2,100,000	\$525,000	\$2,625,000	I
• Remove feral burros (1,800 animals @ \$1,200/burro)	N/A	N/A	\$2,160,000	I
• Renovate and upgrade acquired housing in preserve for employee use (per NPS housing standards - 5 units)	\$393,000	\$75,000	\$468,000	I
• Kelso Depot stabilization, fire protection, landscaping, utilities, parking, restrooms, separate info center	\$1,960,000	\$374,000	\$2,334,000	I
• Plan, produce, and install exterior interpretive exhibits at Kelso Depot	\$210,000	\$40,000	\$250,000	I
• Roadside displays/interpretive exhibits, including parking lot (15 locations)	\$157,000	\$30,000	\$187,000	I
• Trailhead interpretive displays, information kiosks, and parking (five locations)	\$39,500	\$7,500	\$47,000	I
• Construct office space in Needles (1,000 sq. ft.)	\$170,000	\$32,500	\$202,500	I
• Increase accessibility to campsites and comfort stations at Mid Hills campground (10 sites)	\$38,000	\$7,000	\$45,000	I
• Install unstaffed entrance kiosks at 3 locations at Granite Mtns. Reserve; install interpretive panels	\$39,500	\$7,500	\$47,000	I
• Replace comfort station at Soda Springs, construct new info center, interpretive displays, and exhibits	\$330,000	\$63,000	\$393,000	II
• Add group site at Mid Hills, including access road, parking, and composting toilet	\$141,000	\$27,000	\$168,000	II
• Develop an additional 25 sites at existing campgrounds with additional comfort stations	\$393,000	\$75,000	\$468,000	II

• Develop one new 15-site semiprimitive campground with fire rings, picnic tables and pit toilet	\$61,000	\$12,000	\$73,000	II
• Provide picnic tables and fire rings at heavily used backcountry sites; add composting toilet at 2 sites	\$246,000	\$47,000	\$293,000	II
• Construct central maintenance facility (1,400 sq. ft. work bldg. with office, restrooms, vehicle yard	\$285,000	\$54,000	\$346,000	II
• Replace or relocate HIW info center; add nature center and interp. trails; enlarge fire dormitory and garage	\$1,409,000	\$269,000	\$1,678,000	II
• Construct new housing in Baker to replace existing mobile homes (5 units)	\$364,000	\$70,000	\$434,000	II
• Construct new housing at Kelso and HIW (four 2-bedroom duplexes; two 3-bedroom homes)	\$522,000	\$95,000	\$617,000	II
• Restore abandoned mine sites	\$5,240,000	\$1,000,000	\$6,240,000	III
TOTALS	\$14,098,000	\$2,810,500	\$19,075,500	

PHASES

- I 1-5 years
- II 6-10 years
- III spread evenly over 15 years

The construction and planning cost estimates in table 5 are conceptual estimates only. These costs are based on similar types of facilities and past NPS experience derived from contract data. The estimates include indirect costs added to cover such things as design services, contract supervision, and contingencies. They also take into account the cost of contracting for such services in a remote park setting, seasonal constraints, labor availability, and wage rates. The planning costs are calculated at 25 percent of gross construction costs and cover site-specific project planning and compliance. The costs are based on 1998 values.

